

Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 1 of 21

### ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

# UN-INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART B CERTIFICATION REQUIREMENT

*OF* 

**Product Name:** CDMA TSX02

**Brand Name:** N/A

**Model Name:** Bag

**Marketing Name: Hand Bag for Space Travel** 

**Model Difference:** N/A

**Report No.:** EI/2009/40010

**Issue Date:** May 12, 2009

**FCC Rule Part:** Part 15 B, Class B

Filing Type: Certification

**Prepared for: Toshiba Corporation, Mobile Communications** 

Co., Quality Management Division

1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo,

191-8555, Japan

Prepared by: SGS Taiwan Ltd.

0513

**Electronics & Communication Laboratory** 

No. 134, Wu Kung Rd., Wuku Industrial

Zone, Taipei County, Taiwan



Note: This report shall not be reproduced except in full, without the written approval of SGS Taiwan Ltd. This document may be altered or revised by SGS Taiwan Ltd. personnel only, and shall be noted in the revision section of the document.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 2 of 21

# VERIFICATION OF COMPLIANCE

**Applicant:** Toshiba Corporation, Mobile Communications Co., Quality

Management Division

1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555, Japan

**Manufacturer:** Toshiba Corporation, Mobile Communications Co., Quality

Management Division

1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555, Japan

**Product Name:** CDMA TSX02

**Brand Name:** N/A **Model Name:** Bag

**Marketing Name:** Hand Bag for Space Travel

**Model Difference:** 

File Number: EI/2009/40010

Date of test: Dec. 11, 2008 ~ May 08, 2009

**Date of EUT Receive:** Dec. 11, 2008

# We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15B, Class B. The test results of this report relate only to the tested sample identified in this report.

Test By:	Nick Lin	Date:	May 12, 2009	
-	Nick Lin / Engineer			
Prepared By:	Alex Hsieh	Date:	May 12, 2009	
_	Alex Hsieh / Sr. Engineer			
Approved By:	Timent Lu	Date:	May 12, 2009	
_	Vincent Su/Manager			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 3 of 21

# Version

Version No.	Date	Description
00	May 26, 2009	Revise test data and setup photo

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 4 of 21

# **Table of Contents**

1.	GENERAL INFORMATION	5
1.1	General	5
1.2	RELATED SUBMITTAL(S) / GRANT (S)	7
1.3	TEST METHODOLOGY	7
1.4	TEST FACILITY	7
1.5	SPECIAL ACCESSORIES	7
1.6	EQUIPMENT MODIFICATIONS	7
2.	SYSTEM TEST CONFIGURATION	8
2.1	EUT CONFIGURATION	8
2.2	EUT Exercise	8
2.3	TEST PROCEDURE	8
2.4	LIMITATION	9
2.5	CONFIGURATION OF TESTED SYSTEM	10
3.	SUMMARY OF TEST RESULTS	11
4.	DESCRIPTION OF TEST MODES	11
5.	CONDUCTED EMISSIONS TEST	12
5.1	MEASUREMENT PROCEDURE:	12
5.2	TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	12
5.3	MEASUREMENT EQUIPMENT USED:	13
5.4	MEASUREMENT RESULT	13
6.	RADIATED EMISSION TEST	16
6.1	MEASUREMENT PROCEDURE	16
6.2	TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	16
6.3	MEASUREMENT EQUIPMENT USED:	17
6.4	FIELD STRENGTH CALCULATION	17
6.5	MEASUREMENT RESULT	18
APPE	NDIX 1 PHOTOGRAPHS OF SETUP	22
APPEN	NDIX 2 PHOTOGRAPHS OF FUT	25

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 5 of 21

# 1. GENERAL INFORMATION

### 1.1 General:

Type Name:	CDMA TSX02			
Brand Name:	N/A			
Marketing Name:	Hand Bag for Space Tra	nvel		
Model:	Bag			
Model Difference:	N/A			
Data Cable (USB)	N/A			
Simple Hands-free (SHF)	N/A			
Downer Cumply	3.7 Vdc re-chargeable battery or 5Vdc by AC/DC power adapter			
Power Supply:	Battery Model:	61TSUAA, Brand: KDDI		

### **CDMA 2000:**

CDMA 2000.	1						
DUT Standards	CDMA2000		Frequency Range			Maximum Output Power	
and Power:	BC0	TX:	824.70-848.31 M	824.70-848.31 MHz		1.09 dBm	
	ВСО	RX:	869.70-893.37 M	Hz	22	1.09 UDIII	
Final Amplifier Vo	Final Amplifier Voltage and		DC voltag		ge (V) DC current (mA		
Current Information		CDMA 2000 Cellular 3.7		3.7Vd	de	920	
Type of Emission		1M25F9W					
MEID		A1000006E707D5					
Software Version		N/A					
Hardware Version		CS sample					
Antenna Type	PIFA						

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 6 of 21

### **Bluetooth:**

Bluetooth Version	<ul> <li>V1.1 (GFSK)</li> <li>V1.2 (GFSK)</li> <li>V2.0 (GFSK)</li> <li>V2.0 + EDR (GFSK + π/4DQPSK + 8DPSK)</li> </ul>
Frequency Range	2402 – 2480MHz
Channel number	79 channels max., 1MHz step
Rated Power	0.41 dBm (Peak)
Modulation type	Frequency Hopping Spread Spectrum
Antenna Designation	Metal Antenna / 2.1dBi.
Type of Emission	1M19F1D

The EUT is compliance with Bluetooth 2.0 with EDR.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 7 of 21

### 1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: WVS-CN10-J02 filing to comply with Part15 Subpart B, class B of the FCC CFR 47 Rules.

### 1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

### 1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1.

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644..

### 1.5 Special Accessories

Not available for this EUT intended for grant.

### 1.6 Equipment Modifications

Not available for this EUT intended for grant.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 8 of 21

# **System Test Configuration**

# 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

The Toshiba CDMA cellular phone FCC ID: WVS-CN10-J02 was tested with CMU200.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

### 2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 of ANSI C63.4-2003.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 9 of 21

### 2.4 Limitation

#### **(1) Conducted Emission**

According to section 15.107(a), Conducted Emission Class B Limits is as following.

Frequency range	Class B Limits dB (uV)			
MHz	Quasi-peak	Average		
0.15 to 0.50	66 to 56	56 to 46		
0.50 to 5	56	46		
5 to 30	60	50		

### Note

# (2) Radiated Emission

According to section 15.109(a), Radiated Emission Class B Limits is as following:

Frequency (MHz)			Field strength at 3m $dB\mu V/m$
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

Remark: 1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of 3 meters.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>.
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects

the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

<sup>1.</sup> The lower limit shall apply at the transition frequencies

<sup>2.</sup> The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 10 of 21

# 2.5 Configuration of Tested System

Fig. 2-1 Configuration of Tested System



Fig. 2-2 Configuration of Tested System (Remote Side)

(Remote Side) **CMU200** 

**Table 2-1 Equipment Used in Tested System** 

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	<b>Power Cord</b>
1.	EUT	N/A	Hand Bag for Space Travel	N/A	90cm, shielded	N/A
2.	Battery	KDDI	61TSUAA	N/A	N/A	N/A

**Table 2-2 Support Equipment Used in Tested System** 

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1	Radio Communication Analyzer	R&S	CMU200	102189	N/A	Un-shielded
2	Adapter	MITSUMI	0203PQA			

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>.
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects

the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 11 of 21

# 3. Summary of Test Results

FCC Rules Description Of Test		Result
§15.107	Conducted Emission Class B	Compliant
§15.109	Radiated Emission Class B	Compliant

# 4. Description of test modes

The EUT was stayed in normal operation mode with CMU200.

Test Plan:

1. Charge Mode

Mid channel of cellular band was worst case for both Conducted Emission and Radiated Emission test.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

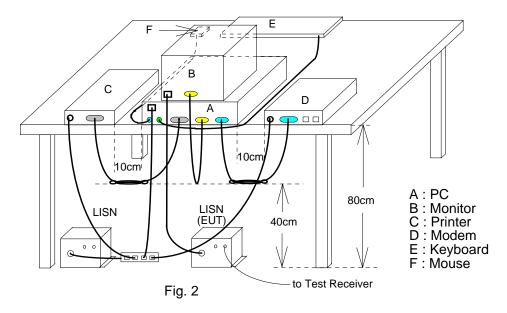
Page: 12 of 21

# 5. Conducted Emissions Test

### **5.1** Measurement Procedure:

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all frequency measured were complete.

# **5.2** Test SET-UP (Block Diagram of Configuration)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 13 of 21

# 5.3 Measurement Equipment Used:

Conducted Emission Test Site							
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.		
TYPE		NUMBER	NUMBER	CAL.			
EMI Test Receiver	R&S	ESCS30	828985/004	09/16/2008	09/15/2009		
LISN	Rolf-Heine	NNB-2/16Z	99012	02/02/2009	02/01/2010		
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	02/02/2009	02/01/2010		
50 Ohms terminator	N/A	EMC-049-1	N/A	06/04/2008	06/03/2009		
Coaxial Cables	N/A	WK CE Cable	N/A	10/30/2008	10/29/2009		

### 5.4 Measurement Result

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

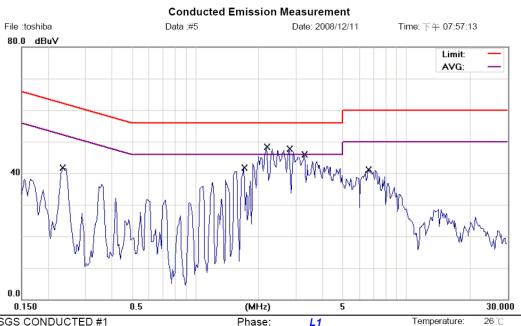


Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 14 of 21

# AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	Charge Mode			Test Date:	Dec. 11, 2008
Temperature:	26 ℃	Humidity:	61 %	Test By:	Jazz



Power:

Distance:

AC 120V/60Hz

Site SGS CONDUCTED #1

Limit: FCC Class B Conduction(QP)

EUT: CDMA TS001

M/N: T001

Note: charge mode

No. Mk.	Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBu∀	dBu∀	dB	Detector	Comment
1	0.2350	39.50	0.15	39.65	62.27	-22.62	QP	
2	0.2350	29.20	0.15	29.35	52.27	-22.92	AVG	
3	1.7000	39.50	0.04	39.54	56.00	-16.46	QP	
4	1.7000	21.20	0.04	21.24	46.00	-24.76	AVG	
5	2.1800	45.70	0.04	45.74	56.00	-10.26	QP	
6	2.1800	23.90	0.04	23.94	46.00	-22.06	AVG	
7 *	2.7900	45.90	0.04	45.94	56.00	-10.06	QP	
8	2.7900	24.20	0.04	24.24	46.00	-21.76	AVG	
9	3.2900	44.30	0.05	44.35	56.00	-11.65	QP	
10	3.2900	25.40	0.05	25.45	46.00	-20.55	AVG	
11	6.6200	34.20	0.09	34.29	60.00	-25.71	QP	
12	6.6200	18.20	0.09	18.29	50.00	-31.71	AVG	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects

the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Humidity:

Air Pressure:



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Temperature:

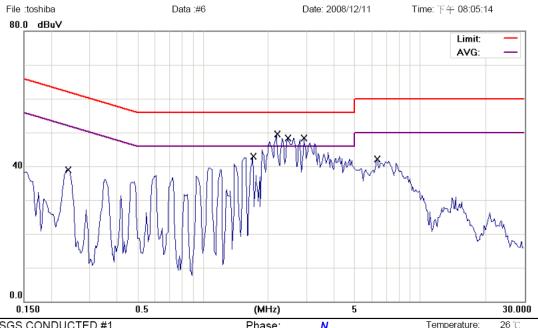
Air Pressure:

hpa

Humidity:

Page: 15 of 21

#### **Conducted Emission Measurement**



Phase:

Power:

Distance:

AC 120V/60Hz

Site SGS CONDUCTED #1

Limit: FCC Class B Conduction(QP)

EUT: CDMA TS001

M/N: T001

Note: charge mode

No. M	k. Freq.	Reading Level	Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.2400	37.10	0.13	37.23	62.10	-24.87	QP	
2	0.2400	25.00	0.13	25.13	52.10	-26.97	AVG	
3	1.7000	41.70	0.03	41.73	56.00	-14.27	QP	
4	1.7000	21.20	0.03	21.23	46.00	-24.77	AVG	
5 *	2.1900	47.60	0.03	47.63	56.00	-8.37	QP	
6	2.1900	25.60	0.03	25.63	46.00	-20.37	AVG	
7	2.4500	45.80	0.03	45.83	56.00	-10.17	QP	
8	2.4500	22.20	0.03	22.23	46.00	-23.77	AVG	
9	2.9200	45.20	0.03	45.23	56.00	-10.77	QP	
10	2.9200	25.40	0.03	25.43	46.00	-20.57	AVG	
11	6.3200	35.80	0.11	35.91	60.00	-24.09	QP	
12	6.3200	20.80	0.11	20.91	50.00	-29.09	AVG	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects

the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 16 of 21

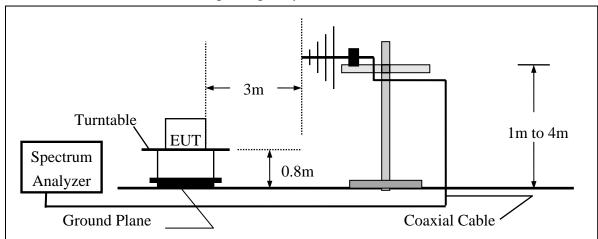
### 6. Radiated Emission Test

### **6.1** Measurement Procedure

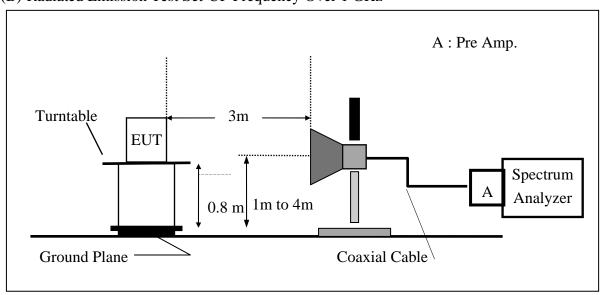
- The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- And also, each emission was to be maximized by changing the polarization of 3. receiving antenna both horizontal and vertical.
- 4. Repeat above procedures until all frequency measured were complete.

# **6.2** Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 17 of 21

### **6.3** Measurement Equipment Used:

966 Chamber									
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.				
TYPE		NUMBER	NUMBER	CAL.					
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2009	02/11/2010				
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2008	11/14/2009				
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2008	05/08/2010				
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2008	11/29/2009				
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2009	01/04/2010				
Radio Communication Analyzer	R & S	CMU200	102189	05/13/208	05/12/2010				
Radio Communication Analyzer	Anritsu	MT8820A	6200307563	04/16/2008	04/15/2010				
DC Block	Agilent	BLK-18	155452	07/05/2008	07/04/2009				
Turn Table	HD	DT420	N/A	N.C.R	N.C.R				
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R				
Controller	HD	HD100	N/A	N.C.R	N.C.R				
Low Loss Cable	Low Loss Cable HUBER+SUHNER		10m	01/05/2009	01/04/2010				
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	1 4m		01/04/2010				
3m Site	SGS	966 chamber	N/A	11/08/2008	11/09/2009				

### **6.4** Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



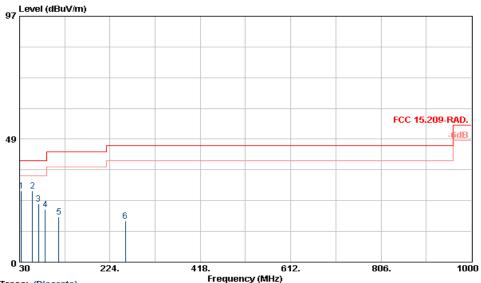
Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 18 of 21

### 6.5 Measurement Result (below 1G)

Test Date: May. 08, 2009 Test Mode: Charge Mode

Frequency Range: 30MHz-1GHz Test By: Nick Temperature: 24 °C Humidity: 61 %



Trace: (Discrete)

Site RF Site B Condition : FCC 15.209-RAD. 3m VULB9168 VERTICAL

: EH/2009/40023 Project No.

Applicant : Toshiba

EUT Description : KDFC KY EUT Model : CN10-J02 Test Mode CHARGE MODE

Temp./Humid. : 25/65

Ope

heraror	. Inck			Preamp	Cable		T 1	Limit	Over	D1-
	Freq	rever	ractor	Factor	ross	ractor	rever	Line	Limit	Kemark
	MHz	dBu₹	dB/m	dB	dB	dB/m	$\overline{\mathtt{dBuV/m}}$	$\overline{\mathtt{dBuV/m}}$	dB	
1	33.88	53.98	13.33	39.80		-26.00			-12.02	
3	58.13 70.74	54.65 52.57	12.91 10.51	40.08 40.89					-12.02 -17.05	
4	85.29	51.67	9.38	40.89		-30.75	20.92		-19.08	
5 6	114.39 256.98	46.72	11.68 11.73			-28.96 -29.71			-25.74 -29.71	

### Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



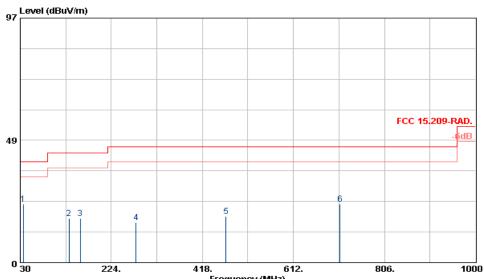
Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 19 of 21

Test Mode: Test Date: May. 08, 2009 Charge Mode

Test By: Nick Frequency Range: 30MHz-1GHz

Temperature: 24 °C Humidity: 61 %



Trace: (Discrete)

Site RF Site B

Condition FCC 15.209-RAD. 3m VULB9168 HORIZONTAL

: EH/2009/40023 Project No. Applicant : Toshiba

EUT Description : KDFC KY EUT Model : CN10-J02 Test Mode CHARGE MODE Temp./Humid. : 25/65

Operator : nick

	Freq			Preamp Factor				Limit Line		
	MHz	dBu₹	dB/m	dB	dB	dB/m	$\overline{\mathtt{dBuV/m}}$	$\overline{\mathtt{dBuV/m}}$	dB	
1 2 3 4 5	36.79 133.79 158.04 276.38 468.44 710.94	45.62 44.48 45.25 43.52	14.14 12.26 16.13	41.88 42.28 42.85 43.14	0.93 1.15 1.41 1.95	-28.02 -26.99 -29.18 -25.06	17.60 17.49 16.07 18.46	40.00 43.50 43.50 46.00 46.00 46.00	-25.90 -26.01 -29.93 -27.54	Peak Peak Peak Peak

### Remark:

- (1) Measuring frequencies from 30 MHz to the 1GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

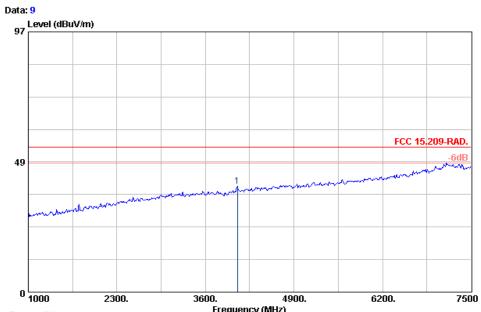


Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 20 of 21

Charge Mode Test Date: Dec. 25, 2008 Test Mode:

Frequency Range: 1GHz – 7.5GHz Test By: Jazz Temperature: 25 °C Humidity: 65 %



Trace: (Discrete)

: RF SITE Site

: FCC 15.209-RAD, 3m BBHA9120D VERTICAL : EI/2008/C0003 Condition

Project No. Applicant : Toshiba : CDMA TS001 EUT Description EUT Model : T001 : charge mode Test Mode Temp./Humid. : 25/65 Operator : Jazz

Freq			Factor			Level		Limit	Remark
MHz	dBuV	-dB/m	dB	dB	dB/m	$\overline{\mathtt{dBuV/m}}$	$\overline{\mathtt{dBuV/m}}$	——dB	
4068 00	35 60	29 79	33 18	7 28	3 89	39 49	54 00	_14 51	Peak

#### Remark:

1

- (1) Measuring frequencies from 1GHz to the 7.5GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.

PasdAntanna Presma Cable

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。
This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>.
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects

the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Timit



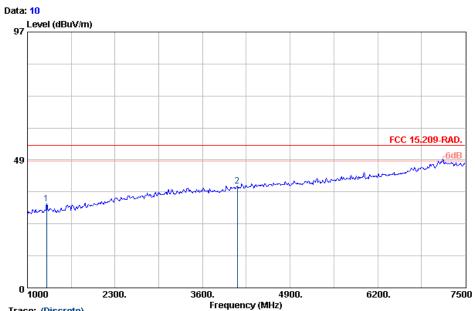
Report No.: EI/2009/40010 **Issue Date: May 12, 2009** 

Page: 21 of 21

Test Mode: Test Date: Dec. 25, 2008 Charge Mode

Test By: Frequency Range: 1GHz – 7.5GHz Jazz

Temperature: 25 °C Humidity: 65 %



Trace: (Discrete)

RF SITE Site Condition FCC 15.209-RAD. 3m BBHA9120D HORIZONTAL

Project No. EI/2008/C0003 Applicant EUT Description : Toshiba : CDMA TS001 EUT Model : T001 Test Mode charge mode Temp./Humid. 25/65 Operator

ReadAntenna Preamp Cable Over Freq Loss Factor Limit Remark Level Factor Factor MHz dBuV dB/m dΒ dΒ dB/m dBuV/m dBuV/m dВ 31.93 54.00 -22.07 Peak 38.60 54.00 -15.40 Peak

### Remark:

- (1) Measuring frequencies from 1GHz to the 7.5GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部份複製。

This Test Report is issued by the Company underits General Conditions of Service which is available on request or accessible at <a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this Test Report is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.